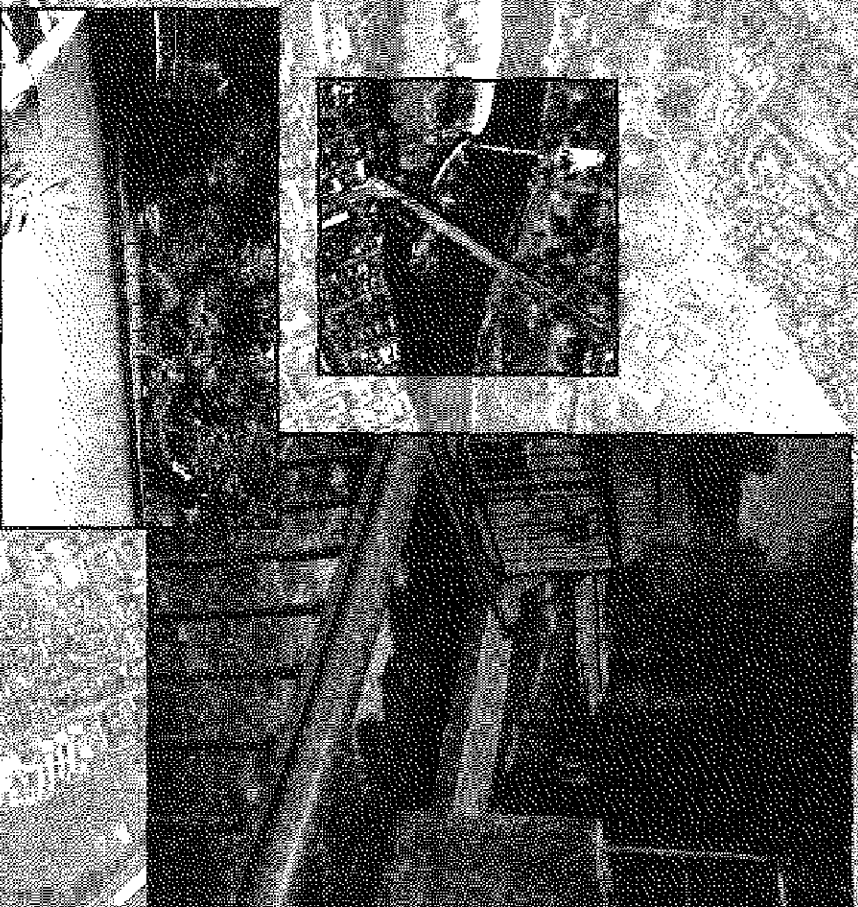


Proposal for the
CALFEU Bay-Delta Program

Fish Passage and Fish Screening Improvement Project, Phase II



July 1998

1-008343

1-008343

Attachment H

COVER SHEET (PAGE 1 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Proposal Title: ACID FISH PASSAGE AND FISH SCREEN IMPROVEMENT PROJECT, PHASE II
Applicant Name: ANDERSON-COTTONWOOD IRRIGATION DISTRICT
Mailing Address: 2810 SILVER STREET
Telephone: 530-365-7329
Fax: 530-365-7623

Amount of funding requested: \$ 860,000 for one years

Indicate the Topic for which you are applying (check only one box). Note that this is an important decision: see page __ of the Proposal Solicitation Package for more information.

- | | |
|---|---|
| <input type="checkbox"/> Fish Passage Assessment | <input checked="" type="checkbox"/> Fish Passage Improvements |
| <input type="checkbox"/> Floodplain and Habitat Restoration | <input type="checkbox"/> Gravel Restoration |
| <input type="checkbox"/> Fish Harvest | <input type="checkbox"/> Species Life History Studies |
| <input type="checkbox"/> Watershed Planning/Implementation | <input type="checkbox"/> Education |
| <input type="checkbox"/> Fish Screen Evaluations - Alternatives and Biological Priorities | |

Indicate the geographic area of your proposal (check only one box):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Sacramento River Mainstem | <input type="checkbox"/> Sacramento Tributary: _____ |
| <input type="checkbox"/> Delta | <input type="checkbox"/> East Side Delta Tributary: _____ |
| <input type="checkbox"/> Suisun Marsh and Bay | <input type="checkbox"/> San Joaquin Tributary: _____ |
| <input type="checkbox"/> San Joaquin River Mainstem | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Landscape (entire Bay-Delta watershed) | <input type="checkbox"/> North Bay: _____ |

Indicate the primary species which the proposal addresses (check no more than two boxes):

- | | |
|--|---|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | |
| <input checked="" type="checkbox"/> Winter-run chinook salmon | <input type="checkbox"/> Spring-run chinook salmon |
| <input type="checkbox"/> Late-fall run chinook salmon | <input checked="" type="checkbox"/> Fall-run chinook salmon |
| <input type="checkbox"/> Delta smelt | <input type="checkbox"/> Longfin smelt |
| <input type="checkbox"/> Splittail | <input type="checkbox"/> Steelhead trout |
| <input type="checkbox"/> Green sturgeon | <input type="checkbox"/> Striped bass |
| <input type="checkbox"/> Migratory birds | |

COVER SHEET (PAGE 2 of 2)

May 1998 CALFED ECOSYSTEM RESTORATION PROPOSAL SOLICITATION

Indicate the type of applicant (check only one box):

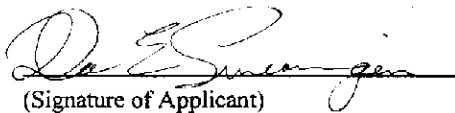
- | | |
|---|---|
| <input type="checkbox"/> State agency | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit |
| <input checked="" type="checkbox"/> Local government/district | <input type="checkbox"/> Private party |
| <input type="checkbox"/> University | <input type="checkbox"/> Other: _____ |

Indicate the type of project (check only one box):

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Planning | <input checked="" type="checkbox"/> Implementation |
| <input type="checkbox"/> Monitoring | <input type="checkbox"/> Education |
| <input type="checkbox"/> Research | |

By signing below, the applicant declares the following:

- (1) the truthfulness of all representations in their proposal;
- (2) the individual signing the form is entitled to submit the application on behalf of the applicant (if applicant is an entity or organization); and
- (3) the person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section II.K) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.


(Signature of Applicant)

permanent fish screen solution design for the GCID 3,000 cfs main intake and pump station. Mr. Wilson managed preliminary design of the M&T Ranch pump station relocation and fish screens. Other diversion intake, pump station, and fish screen designs he has managed include the Westpac Utilities Orr Ditch diversion on the Truckee River, Nevada; the Clear Lake intake for the Geysers Water Supply Project, Lake County, California; and the Yakima-Tieton Irrigation District intake, Yakima, Washington.

Mark Oliver, Lead Planner

B.S., Environmental Policy Analysis and Planning

Mark Oliver is a senior environmental planner with experience in environmental impact analysis, documentation, and permitting of water resources projects throughout Northern California. He manages environmental studies and acquires permits for federal, state, local, and private clients. He managed a joint NEPA/CEQA document for the proposed construction of a siphon, irrigation canals, check structures, and pipelines on Butte Creek for the WCWD and the USFWS. The siphon and two dam removals have been completed, which will greatly improve chinook salmon fish passage. He directed the NEPA/CEQA documentation and compliance efforts to install additional water conveyance facilities to seven wildlife refuges and management areas in the Sacramento and San Joaquin Valleys for the Reclamation and USFWS. Mr. Oliver is also managing an EIS/EIR for the proposed Trinity River fishery restoration.

Bob Gatton, P.E., Fish Screen and Fish Passage Senior Consultant

M.S., B.S., Civil Engineering; M.S., Systems Management; Registered Professional Engineer: Washington

Bob Gatton specializes in designing fish screening, passage, and hatchery facilities. He is a design consultant for the GCID and RD108 fish screening facilities on the districts' Sacramento River diversions. For the Rocky Reach Dam and Hydroelectric Facility on the Columbia River, he managed conceptual design, layout, equipment selection, and agency coordination for the 2,000 cfs and 5,000 cfs ganged screens and other fish protection facilities to pass more than 1 million fish around the dam. The project was completed in 10 weeks to meet the fish outmigration schedule, while avoiding power service disruption. Mr. Gatton provided similar services for Yelm Hydropower, North Shore Dalles Hydro, and Dryden Canal, all large, flat plat profile wire screens oriented diagonally across the flow. Location, orientation, screen cleaning, and juvenile bypass systems were all design challenges for these projects.

Mark Randall, P.E., Structural Engineer

M.S., B.S., Structural Engineering; Registered Civil and Structural Engineer: California, Nevada, and Arizona

Mark Randall has 17 years of engineering experience, specializing in design of submerged structures in rivers, lakes, basins, and related environments. He was lead structural designer for the GCID interim fish screen and is lead structural designer for the GCID permanent screen. He provided construction oversight for installing the GCID interim fish screen. Mr. Randall is lead structural engineer for the Reclamation District 108 positive barrier fish screen at the District's 800 cfs Wilkins Slough Pumping Plant on the Sacramento River. This unique structure required coffer dams for in-river construction. Mr. Randall was also the lead structural designer for the Orr Ditch Pump Station for Sierra Pacific Power Company in Reno, Nevada, and for the Big Bend Water District Water Treatment Plant in Laughlin, Nevada. Both projects included river intakes with fish screens for protection of threatened or endangered fish species.

Timothy Hamaker, Fisheries Biologist

B.S., Fisheries Biology; Certified Fisheries Scientist: California

Tim Hamaker has extensive experience managing fisheries habitat inventories, aquatic ecological investigations, aquatic and terrestrial contamination studies, and water quality assessments. For Reclamation, he prepared a biological assessment on the federally listed endangered winter-run chinook

salmon and bald eagle, evaluating the effects of CVPIA implementation on Sacramento-San Joaquin river temperatures and flows and effects on anadromous fish. As part of an analysis of the benefits of expanding the Spring Creek Debris Dam, Mr. Hamaker evaluated the results of water quality modeling to assess their impact to and the long-term recovery of chinook salmon and steelhead trout in the Sacramento River near Redding. Several proposed expansions of the SCDD were evaluated to ascertain their benefit to the fishery resource downstream of the vicinity of Keswick Reservoir.

Compliance with Standard Terms and Conditions

The terms and conditions discussed in Section O of the Request for Proposals are acceptable to the applicant. Forms 7 (Nondiscrimination Compliance Statement), 10 (Noncollusion Affidavit), and DI-2010 are attached.

NONDISCRIMINATION COMPLIANCE STATEMENT

ITEM 7

COMPANY NAME

ANDERSON-COTTONWOOD IRRIGATION DISTRICT

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

OFFICIAL'S NAME

DEE E. SWEARINGEN

DATE EXECUTED

6-30-98

EXECUTED IN THE COUNTY OF

SHASTA

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

GENERAL MANAGER

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

ANDERSON-COTTONWOOD IRRIGATION DISTRICT

U.S. Department of the Interior

**Certifications Regarding Debarment, Suspension and
Other Responsibility Matters, Drug-Free Workplace
Requirements and Lobbying**

Persons signing this form should refer to the regulations referenced below for complete instructions:

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions - The prospective primary participant further agrees by submitting this proposal that it will include the clause titled, "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions. See below for language to be used; use this form for certification and sign; or use Department of the Interior Form 1954 (DI-1954). (See Appendix A of Subpart D of 43 CFR Part 12.)

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Appendix B of Subpart D of 43 CFR Part 12.)

Certification Regarding Drug-Free Workplace Requirements - Alternate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12.)

Signature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

**PART A: Certification Regarding Debarment, Suspension, and Other Responsibility Matters -
Primary Covered Transactions**

CHECK ☒ IF THIS CERTIFICATION IS FOR A PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

**PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -
Lower Tier Covered Transactions**

CHECK ☒ IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

DI-2010
March 1995
(This form consolidates DI-1953, DI-1954,
DI-1955, DI-1956 and DI-1963)

PART C: Certification Regarding Drug-Free Workplace Requirements

CHECK X IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.

Alternate I. (Grantees Other Than Individuals)

A. The grantee certifies that it will or continue to provide a drug-free workplace by:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
- (b) Establishing an ongoing drug-free awareness program to inform employees about--
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted --
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

B. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

Check ☐ if there are workplaces on file that are not identified here.

PART D: Certification Regarding Drug-Free Workplace Requirements

CHECK ☐ IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL.

Alternate II. (Grantees Who Are Individuals)

- (a) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;

DI-2010
March 1995
(This form consolidates DI-1953, DI-1954,
DI-1955, DI-1956 and DI-1963)

- (b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

PART E: Certification Regarding Lobbying
Certification for Contracts, Grants, Loans, and Cooperative Agreements

CHECK ☒ IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT, SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK ☐ IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

Dee E. Swearingen

General Manager

TYPED NAME AND TITLE

DATE

6-30-98

DI-2010
March 1995
(This form consolidates DI-1953, DI-1954,
DI-1955, DI-1956 and DI-1963)

Agreement No. _____

Exhibit _____

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY
BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

STATE OF CALIFORNIA)

COUNTY OF SHASTA)

)ss

DEE E SWEARINGEN
(name)

, being first duly sworn, deposes and

says that he or she is

GENERAL MANAGER
(position title)

of

ANDERSON-COTTONWOOD IRRIGATION DISTRICT
(the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: JUNE 30, 1998

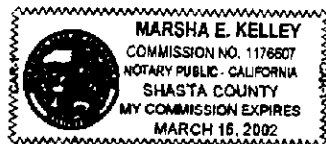
By

Dee E Swearingen
(person signing for bidder)

Subscribed and sworn to before me on

JUNE 30, 1998

Marsha E. Kelley
(Notary Public)



(Notarial Seal)

EXECUTIVE SUMMARY

Project Title and Applicant Name

Fish Passage and Fish Screening Improvement Project, Phase II, submitted by the Anderson-Cottonwood Irrigation District (ACID)

Project Description and Primary Biological/Ecological Objectives

This project is Phase II of an ongoing CALFED-funded effort to correct fish passage and fish screening problems at ACID's main diversion dam. The project will directly benefit all anadromous Sacramento River fish species within a critically important spawning reach for federal and state-listed endangered winter-run chinook salmon and all other upper Sacramento River salmon runs currently proposed for listing. Screen improvements will correct existing downstream passage deficiencies (reduced entertainment, impingement, and predation of juveniles); ladder improvements will correct upstream passage deficiencies (reduced injury, stress, crowding, disorientation, and delays of adults) and enable appropriate fish passage management by agencies participating in the ACID Fish Passage Team. This proposal, conceived from ACID Fish Passage Team input, recognizes that a combined fish screen/fish ladder approach is the most economically and biologically beneficial fish passage solution. Funding will ensure successful design and environmental compliance completion, with construction documents for bidding in spring 1999. Screening facilities that meet current NMFS and CDFG screening criteria will benefit Category III fisheries objectives. Proposed project features and location are shown on Figures 1a and 1b in the Project Description.

Approach/Tasks/Schedule

The proposed Phase II approach includes completing final design, environmental documentation, and permitting. Continuing Phase I efforts, previously funded by CALFED, include preliminary fish ladder and screen design and environmental compliance work. Construction, construction management, mitigation and monitoring would occur under Phase III, scheduled for spring 1999. Delays in funding Phase II or Phase III will delay the project and associated fisheries benefits for 1 or more years or result in more costly construction staggered over multiple seasons. The sequencing of tasks is shown on Figure 2 in the Project Description section of this proposal. This proposal requests funding through Phase II only. As shown, construction completion is expected by 2000, assuming that funding for construction is received by ACID in early 1999.

Justification for Project and Funding by CALFED

CALFED has demonstrated that fish passage improvements are necessary at the ACID facility by funding the current preliminary design and environmental efforts. Additional justification includes:

- The progress made toward a long-term solution through joint efforts between ACID and the Fish Passage Team demonstrates the group's ability to work effectively toward completing construction by 2000.
- The project directly addresses key stressors identified by CALFED, including unscreened diversions and diversions not screened to current standards in an affected river reach that provides habitat for CALFED priority species.
- Screen and ladder design concepts are being developed in conjunction with the ACID Fish Passage Team to ensure appropriate and timely design.
- ACID lacks the financial resources to fund the project through District funding. CALFED funding will provide justification and incentive for matching funds through other programs, such as the Anadromous Fish Screen Program.

Budget Costs and Third Party Impacts

The requested funding is \$860,000 for Phase II. This project will benefit all third parties interested in restoration of anadromous fish species in the Sacramento River/Central Valley and Bay-Delta systems. Impacts to third parties will be minimal because the majority of the work will be completed within existing ACID right-of-way and/or adjacent to existing facilities. The fish ladder and screen improvements will be implemented in accordance with all required permits and approvals.

Applicant Qualifications

ACID continues to work successfully with the Fish Passage Team in Phase I toward long-term fish passage solution to be constructed in 1999. ACID manager, Dee E. Swearingen, has overseen construction projects on Hooker Creek, Cottonwood Creek, and the South Fork of Cottonwood Creek, which required permitting and approvals from the Corps of Engineers (404), Regional Water Quality Control Board (401), and CDFG (1603). Mr. Swearingen, while managing Western Canal Water District, was instrumental in initiating fish passage improvements on Butte Creek. The Point Four Dam removal and Western Canal Water District's Butte Creek siphon project were formulated under his oversight. Other project team members, a list of successful representative projects, and a letter of recommendation for the applicant team are shown on Figures 3, 4, and 5, respectively, in the Project Description section of this proposal.

Monitoring and Data Evaluation

A draft monitoring program will be developed under Task 5 in coordination with CDFG and NMFS.

Local Support/Coordination with other Programs/Compatibility with CALFED Objectives

This project supports programs administered by the CDFG, USFWS, NMFS, Reclamation, and Natural Resources Conservation Service. CDFG will continue to provide guidance and review of the fish screen and ladder designs through an in-kind services agreement. The project directly addresses key stressors, including migration barriers or delays caused by physical structures, inadequate attraction flows, predation, and diversions not screened to current standards.

Title Page

Title of Project

Fish Passage and Fish Screening Improvement Project, Phase II

Name of Applicant/Principal Investigator(s)

Anderson-Cottonwood Irrigation District
2810 Silver Street
Anderson, CA 96007
Phone: 530/365-7329. Fax: 530/365-7623
Contact Person: Dee Swearingen, General Manager

Type of Organization and Tax Status

Tax exempt Special District, operating under Division 11 of the California Water Code

Tax Identification Number

Federal Identification Number: 94-1682332

Participants/Collaborators in Implementation

The proposed improvements will be designed by an engineering consultant to ACID with input from the ACID Fish Passage Team, composed of the CDFG, USFWS, NMFS, Reclamation, and DWR. This team, supported by CH2M HILL, would continue toward completion of the necessary design, environmental compliance, and construction documents to allow for construction in 1999.

Project Description

Project Description and Approach

The ACID Fish Passage Improvement Project, Phase II, will result in construction of fish passage facilities (ladders and a replaced screen) to correct fish passage problems and allow for annual management of fish passage at the existing ACID main diversion dam, near Redding, California. It is proposed to implement this project in three phases. Phase I (preliminary design and environmental compliance), has been funded by CALFED and is currently progressing. In Phase II, funding secured from CALFED will be used for CH2M HILL, ACID's consultant, to work closely with participating agencies to confirm design criteria, complete final design, prepare the necessary CEQA/NEPA environmental document, obtain the required permits, and complete construction bid documents. In Phase III, funding will be secured to construct the facilities, complete environmental mitigation, and establish/conduct the monitoring program. For Phase III, ACID will request matching funds from other sources, such as the CVPIA Restoration Fund and the Anadromous Fish Screen Program, with the intent that the overall split of funding at the conclusion of the project will be approximately 50 percent State and 50 percent Federal.

The design of the fish passage facilities will be developed directly with CDFG, NMFS, and other agencies to ensure compliance with current criteria, while public input will be solicited through the environmental documentation process. The proposed approach will result in the facilities being constructed in 1999 and fully operational by the year 2000.

Proposed Scope of Work

Task 1—Contract Management and Administration

Manage project cost and schedule, administer grant moneys, develop work plans, coordinate with other initiatives, coordinate and oversee the activities of the project team, communicate with agency staff, and provide financial reports to CALFED or the CALFED contract administrator. The applicant will prepare monthly reports summarizing degree of completion, activities during the reporting period, costs incurred, and project milestones.

Task 2—Construction Documents

Prepare construction plans and specifications for distribution to construction contractors. The types and locations of facilities to be designed and included within the construction documents will be established at the end of Phase I. This task will provide for the design of the screen at the preferred site, and fish ladders at up to three locations on the dam. Drawings will include site and grading plans, structural and mechanical plans and details, and electrical details. Specifications will include provisions for bidding, contract forms, requirements for bonds and insurance, and required workmanship and materials.

Prepare documents in one or multiple bid packages or schedules as deemed necessary to attract qualified bidders and match funding cycles. Conduct geotechnical investigations to establish the elevation of bedrock and the characteristics of the alluvium. Geotechnical work will include four

to six borings at the fish screen site and one or two borings for each fish ladder. This scope does not provide for conducting borings from a barge. Support intermediate and latter phases of environmental documentation and permitting. Prepare final engineer's cost estimate to verify funding needs and evaluate construction bids.

Task 3—Environmental Documentation

Complete the preparation of a joint NEPA/CEQA document that discloses all impacts and benefits associated with the proposed project. Activities are expected to include:

- Public scoping
- Prepare administrative draft document for agency review
- Prepare public draft document
- Respond to public comments/prepare draft document
- Prepare findings/decision documents

It is anticipated that this task is expected to include five to seven meetings including public scoping, hearings, and coordination meetings with agency personnel. This task would dovetail with the completion of Phase I environmental efforts which include development of a preferred alternative, as well as reasons for the elimination of alternatives determined to be infeasible. ACID will be the lead agency under CEQA, and either Reclamation or the Service will be the lead agency under NEPA.

Task 4—Permitting

Prepare applications and coordinate acquisition of all environmental permits required to construct the project. Permits and approvals will be required by the following agencies:

- Corps of Engineers (404/Section 10 Permit)
- CDFG (Streambed Alteration Agreement/CESA compliance)
- NMFS (ESA compliance)
- USFWS (ESA compliance)
- State Lands Commission (Lease Across State Submerged Lands)
- Regional Water Quality Control Board (Waste Discharge Requirements/Stormwater)
- State Reclamation Board (Encroachment Permit)
- City of Redding/Caltrans/Union Pacific right-of-way encroachment approvals

It is anticipated that this task will include 5 to 10 coordination meetings with agency personnel. This task will also dovetail with ongoing efforts in Phase I, which are focused on preliminary contacts with all agencies listed above, and the identification of key contacts and processing timeframes.

Task 5—Monitoring Plan

Develop a draft biological monitoring plan in coordination with CDFG, NMFS, and USFWS that will measure the success of the project in terms of fish passage improvements. The plan concept is discussed in greater detail under the "Monitoring and Data Evaluation" heading below.

Location and/or Geographic Boundaries of the Project

The proposed project is located in and adjacent to the Sacramento River in Shasta County and the Sacramento River Watershed Region, as shown on Figures 1a and 1b. The ACID Diversion Dam is located on the Sacramento River approximately 3.5 miles south of Keswick Dam (approximately river mile 299), immediately upstream of the Highway 273 (Market Street) Bridge in Redding, as shown on Figures 1a and 1b.

Expected Benefits

Key stressors associated with the ACID Diversion Dam include migration barriers caused by physical structures resulting in stranding or delays of migrating anadromous fish and inadequate attraction flows. Implementation of the project would make the additional 3.5 miles of the Sacramento River between the ACID dam and Keswick Dam more easily accessible to all runs of chinook salmon, steelhead, and sturgeon species for spawning and rearing. The ladders also will be designed so they may be closed if necessary to block fish passage during periods when CDFG, USFWS, and NMFS determine that spawning habitat upstream of the ACID Diversion Dam is being fully utilized.

Fish passage problems at the ACID dam are documented in several studies, including the *Central Valley Fish and Wildlife Management Study—Fishery Problems at Anderson Cottonwood Irrigation District Diversion Dam, Sacramento River, California*, prepared in July 1983. The fish passage problem at the ACID diversion dam has been identified as Action Number 10 for the Upper Mainstem Sacramento River in the Draft Restoration Plan for the Anadromous Fish Restoration Program (USFWS, 1997). Furthermore, Section 3406(b)(17) of the Central Valley Project Improvement Act (CVPIA) specifically authorizes the U. S. Secretary of the Interior to achieve the goal of resolving the fish passage problems at ACID's diversion dam. The current ladders are generally considered a significant barrier to adult anadromous fish passage, and provide insufficient attraction flows and orientation to efficiently provide passage for adult salmonids.

Key stressors that will be addressed by the proposed fish screen element of the project are unscreened diversion, and diversions not screened to current standards. The existing system, which does not meet current criteria, was designed so that the screen panels release from the frame to prevent damage to the screen panels when water pressure becomes excessive. This condition usually results from a buildup of algae and other organic matter on the screens. When such an event occurs, the diversion is partially unscreened, and fish can pass through the unscreened portion of the diversion. These fish are then entrained into the ACID canal system and potentially lost. The potential for panels becoming clogged has increased since the completion of the Shasta Dam temperature control device, because the variability in flows has increased debris flows. The screen would be upgraded to meet current criteria and eliminate the performance problem, and expanded to function under all river and diversion conditions.

Species and Benefits. Actions taken to address the stressors listed above will primarily benefit winter-, spring-, fall-, and late-fall-run chinook salmon, steelhead trout, green sturgeon, and white sturgeon.

Benefits to Third Parties and Other Restoration Programs. These actions will benefit all

third parties interested in restoration of anadromous fish species in the Sacramento and Bay-Delta systems. The proposed project directly supports other programs such as those being implemented under the Central Valley Project Improvement Act (CVPIA) through the Anadromous Fish Restoration Program (AFRP), Section 3406(b)(17), and the California Salmon, Steelhead Trout and Anadromous Fisheries Program Act of 1988. Third-party impacts associated with ladder construction are anticipated to be minimal since much of the proposed project is within the Sacramento River. Construction will be in compliance with all applicable regulations and necessary permits.

Background and Ecological/Biological/Technical Justification

The proposed fish passage and fish screen project directly addresses at least two ERPP objectives. The fish passage element addresses the "Dams, Reservoirs, Weirs, and Other Structures" implementation objectives on page 152, Volume II of the ERPP. Target 2 under this objective states: "Reduce blockage to fish migrations at the ACID dam." The fish screen project addresses the "Reducing or Eliminating Stressors" objectives on page 151, Volume II of the ERPP. Target 1 seeks to "Reduce entertainment of juvenile salmon, steelhead, sturgeon, and splittail into water diversions to levels that will not impair stock rebuilding or species restoration."

The proposed fish passage project element has been discussed by resource agencies for years in terms of increased potential for anadromous fish passage, access to under-utilized habitat, and increased production of natural runs of anadromous salmonids and sturgeon. The proposed fish screen project element will result in substantial improvements in terms of reduced potential for entertainment and loss of anadromous fish. The ACID project is located within a critically important reach for spawning chinook salmon and steelhead in the upper Sacramento River.

Spawning surveys have estimated that at least 66 percent of all listed endangered winter-run chinook spawned between the Sacramento River bridge at Anderson and the ACID diversion dam from 1981 to 1993 (F. Fisher, CDFG pers. comm.). Most of these fish spawned upstream of the Bonnyview diversion. However, in surveys since 1988 very few winter-run chinook redds have been observed upstream of the ACID dam despite a continuing project to provide spawning gravel from stockpiles downstream of Keswick Dam.

Spawning surveys have estimated that, within the Sacramento River, approximately 75 percent of State of California proposed threatened spring-run chinook salmon spawned in the reach between Sacramento River bridge at Anderson and ACID's diversion dam during 1961 and from 1983 to 1993 (op. cit.). However, with the existing ladders at ACID's diversion dam, these adult spring-run chinook cannot easily access the cooler holding pools upstream of the dam. This holding habitat is crucial for spring-run chinook salmon because they hold in the mainstem of the Sacramento River from their arrival in May and until they spawn in September. The ability to regulate the passage of chinook salmon into the upstream reach of the Sacramento River would allow CDFG and USFWS to better manage spawning densities and geographical separation during the overlapping period when spring and fall-run chinook salmon spawn.

The fall- and late-fall-run chinook spawning surveys have also identified that approximately 25 percent of fall chinook and 43 percent of late-fall chinook salmon spawned in the reach of the river between Anderson and the ACID diversion dam from 1967 to 1990 and 1984 to 1992,

respectively (F. Fisher, pers. comm.). These species may also benefit from improved passage facilities at the ACID dam. Similarly, sturgeon species have been known to frequent the upper mainstem Sacramento River in the vicinity of the ACID facilities. These species may also benefit from additional access into the Sacramento River reach above the ACID dam.

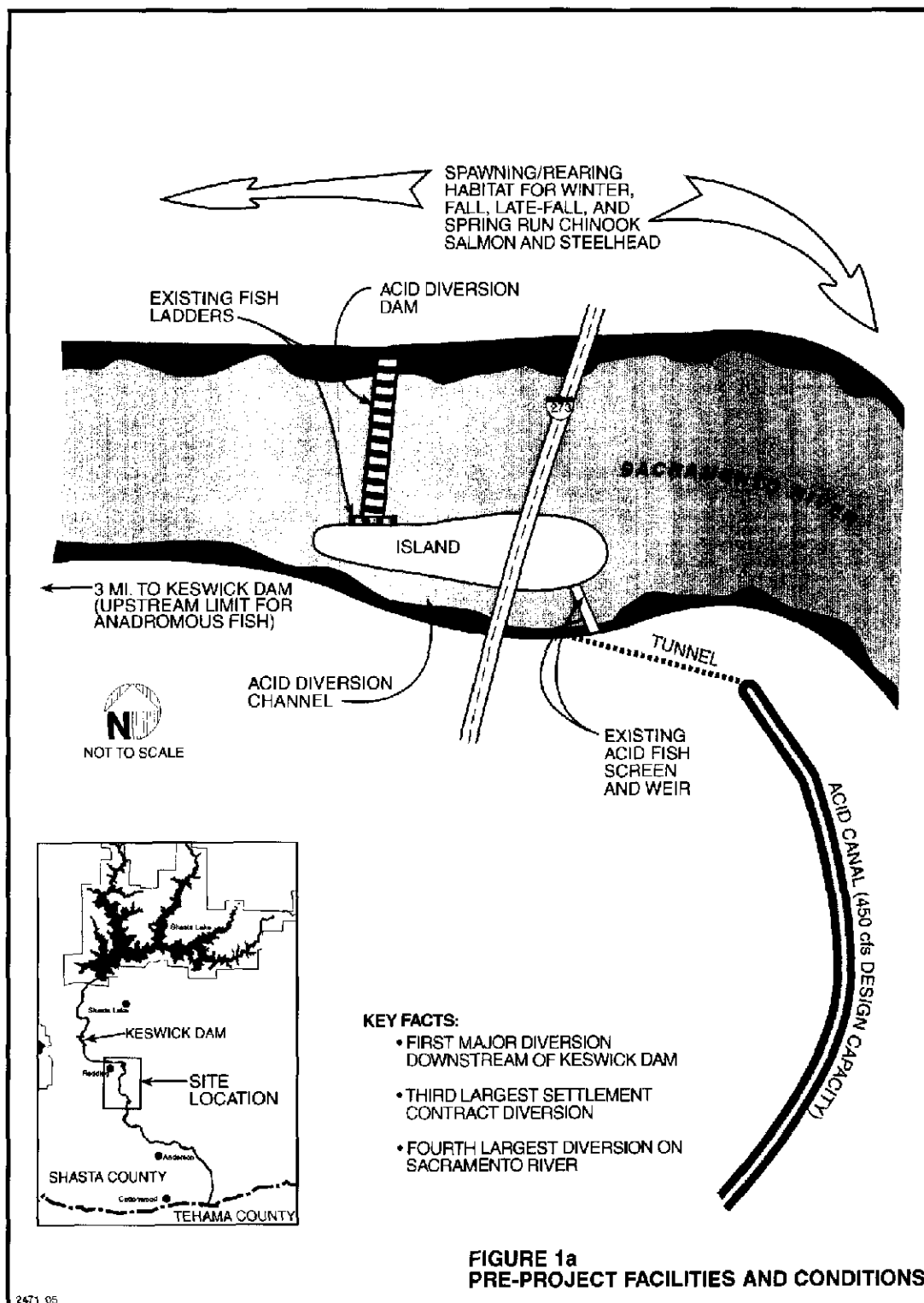
Monitoring and Data Evaluation

A monitoring program will be developed in Phase II and implemented in Phase III in coordination with CDFG and NMFS to evaluate the effectiveness of the proposed screen and ladders. Screen performance could be monitored during the initial diversion season by fish trapping, using a combination of rotary screw traps and/or fyke nets at strategic locations upstream and downstream within the Sacramento River and behind the ACID screens. A monitoring program involving direct diver observation and/or video monitoring coupled with releases of tagged juvenile salmonids may be desirable to evaluate and document screen performance following construction. In addition, hydraulic performance in meeting screening criteria will be monitored by systematically measuring screen approach and sweeping velocities at a range of diversion flows and Sacramento River discharges. These activities will be developed, conducted, and reported under CDFG, Reclamation, NMFS, and ACID guidance.

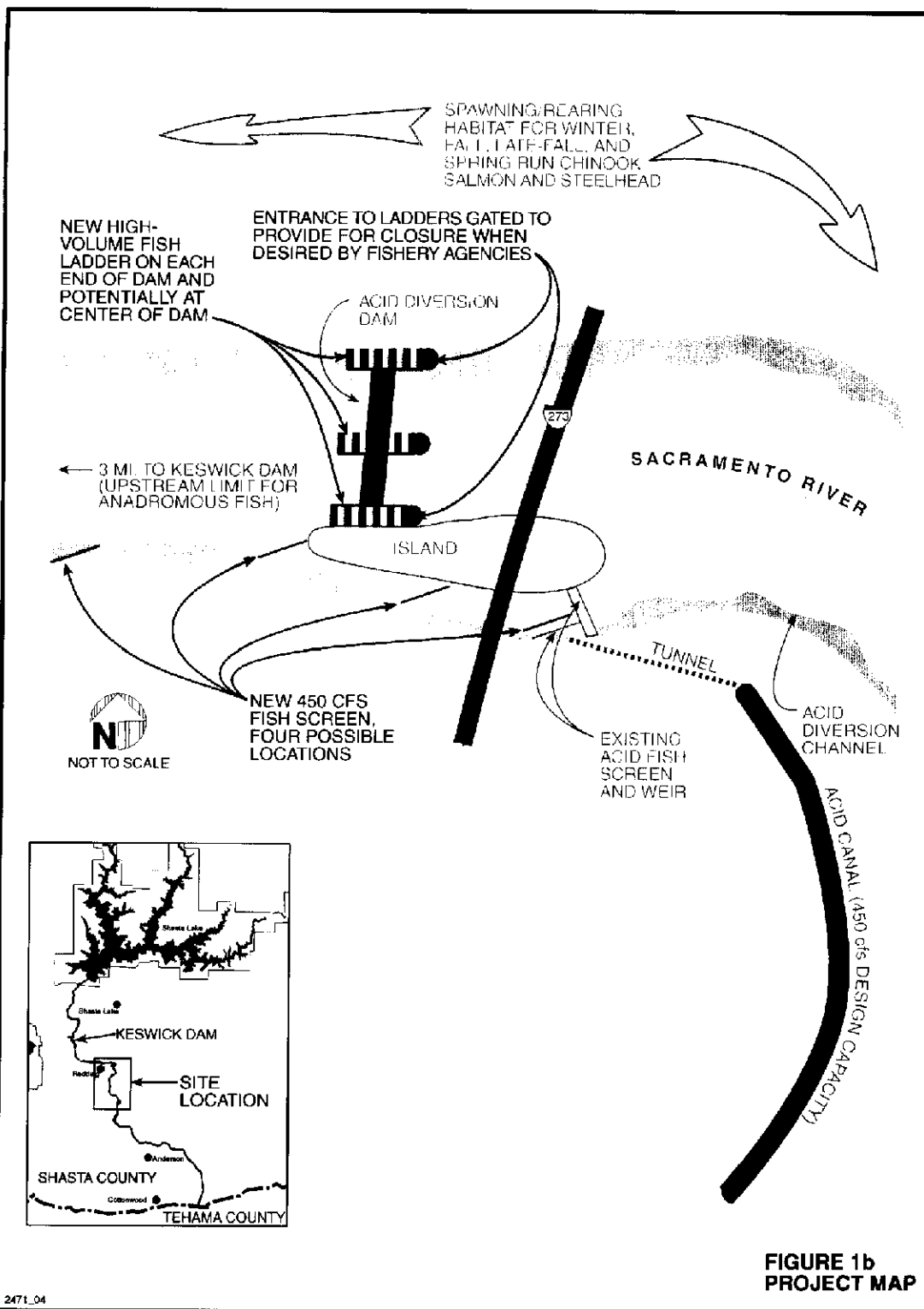
Implementability

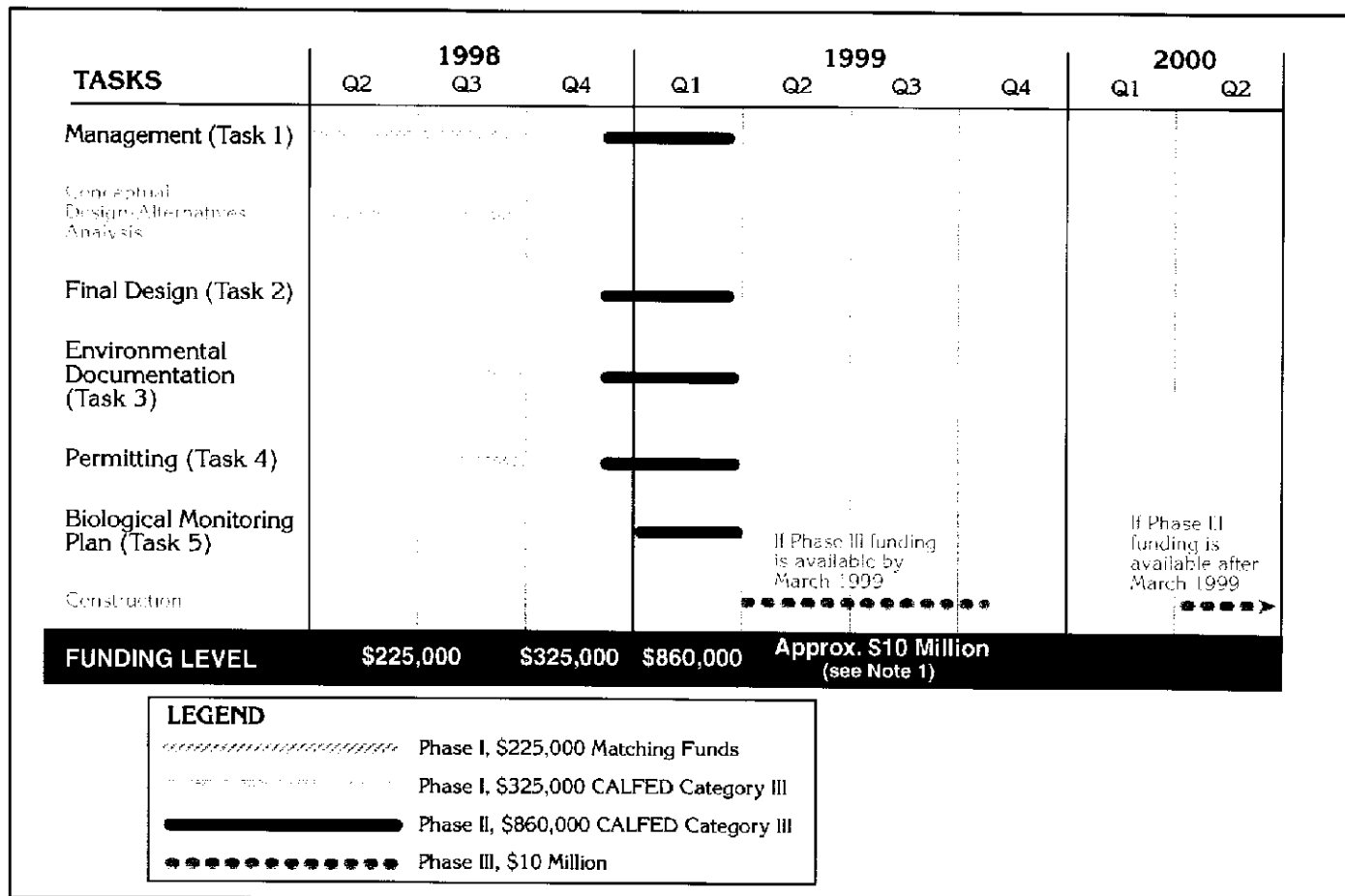
The proposed project will reduce impacts to anadromous species which are 1) currently protected by the Endangered Species Act or proposed for listing, and 2) the subject of restoration efforts including the AFRP as required by the CVPIA. The project supports programs administered by a number of agencies including CDFG, USBR, USFWS, NMFS, and the NRCS. Design and construction of the project will require coordination with each of these agencies, including CDFG in the capacity of recommending design criteria for the proposed upgraded screen on the main diversion and ladder on the dam. Support from these agencies and the general public is anticipated, given the overall fishery benefits associated with the project.

In addition to a NEPA/CEQA document and associated public scoping process, permits and approvals will be required as described in the Scope of Work section of this proposal. No issues that would significantly affect or delay the environmental documentation and permitting process are expected. The project will not result in any significant land use changes, as the facilities would be located primarily within existing ACID right-of-way. The project will not be affected by hydrology or climate because the facilities will be designed to withstand anticipated Sacramento River flows and conditions.



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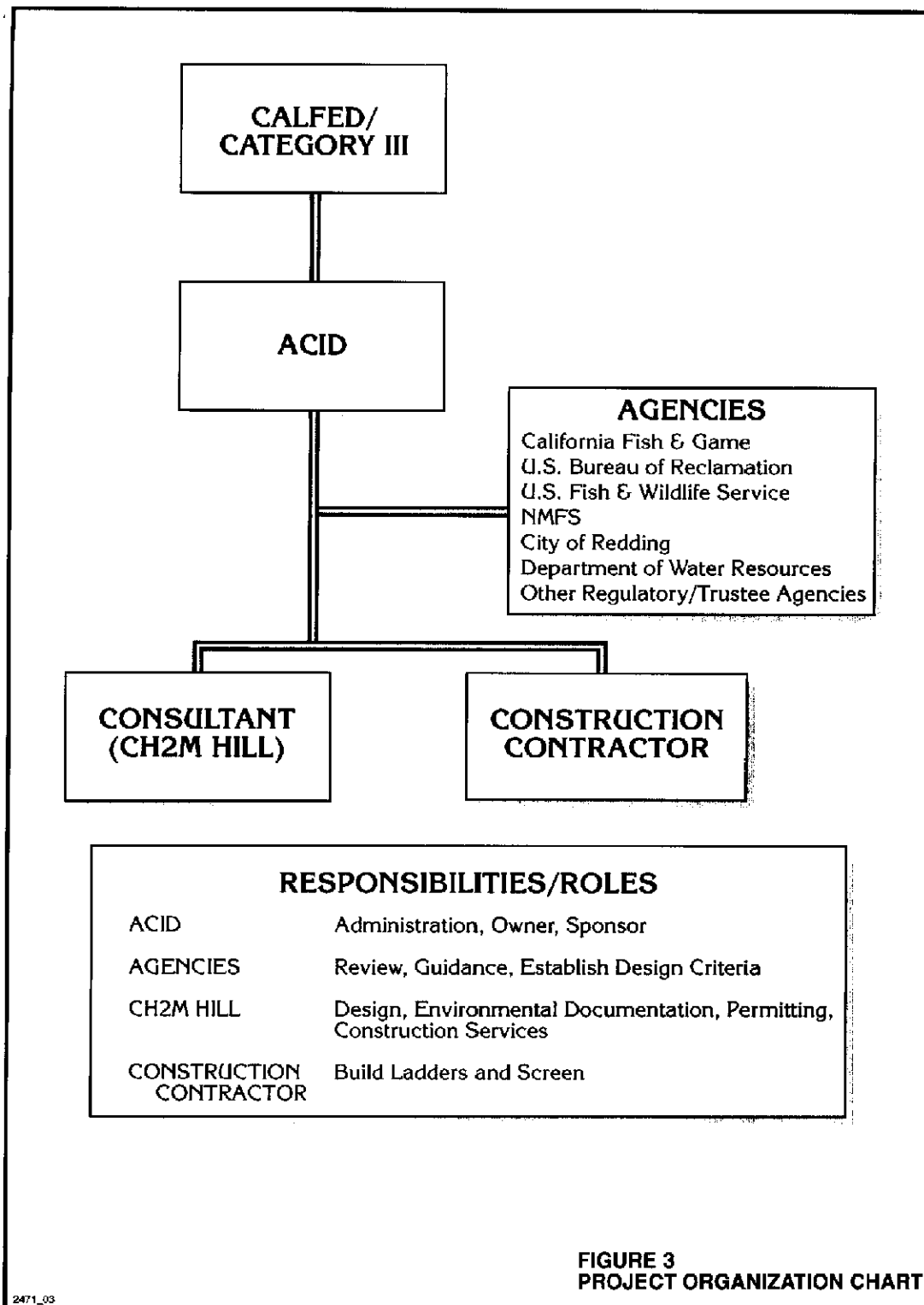




Notes:

1. Order-of-magnitude estimate. Assumes three ladders on dam, control gates, and a 450-cfs fish screen. Includes 25% contingency.

**FIGURE 2
PROJECT COST AND TIMELINE**



	GCID Diversion, Sacramento River	RD108 Diversion, Sacramento River	WCWD Butte Creek Siphon	Point Four Dam, Butte Creek	ACID Cottonwood Creek, South Fork Cottonwood Creek, and Hooker Creek Siphons
Endangered Species	✓	✓	✓	✓	✓
Instream Structural Work	✓	✓	✓	✓	✓
Cooperation with Agencies	✓	✓	✓	✓	✓
Grant Funding/ Administration	✓	✓	✓	✓	✓
Project Development	✓		✓	✓	✓
Pipeline/ Canal Design	✓		✓		✓
Environmental Documentation			✓	✓	✓
Permitting			✓	✓	✓
Construction Management		✓	✓		✓
Sacramento River System	✓	✓	✓	✓	✓

**FIGURE 4
PROJECT TEAM EXPERIENCE**

Costs and Schedule to Implement Proposed Project

Budget Costs

TABLE 1
Cost Breakdown

Project Phase/ Task	Direct Labor Hours	Direct Salary/ Benefits	Overhead Labor	Service Contracts	Material/ Acquisition Contracts	Misc./Direct Costs	Total
Task 1	800	\$18,000	\$1,000	\$0	0	\$1,000	\$20,000
Task 2	40	900	100	635,000	0	500	636,500
Task 3	80	1,800	200	100,000	0	500	102,500
Task 4	20	450	100	49,000	0	450	51,000
Task 5	20	450	100	50,000	0	450	50,000
Total	960	\$21,600	\$1,500	\$834,000	0	\$2,900	\$860,000

Schedule Milestones

As shown on Figure 2, Phase II activities will be merged with Phase I preliminary tasks. Periodic meetings with the ACID Fish Passage Team will continue, with final design documents produced by late February 1999 to allow for bidding and construction by April 1999. Necessary NEPA/CEQA documents will also be finalized by February 1999, with a public draft made available by November 1998. Permits will be acquired to allow for inclusion in the bid/contract documents.

Third Party Impacts

As described above, no significant adverse third-party impacts are anticipated. Land use changes are not anticipated. Those parties who support restoration of anadromous species that would benefit from the proposed project would also benefit.

Applicant Qualifications

The project team and participating agencies are shown on Figure 3 above. ACID staff will manage the project and administer the budget. The CDFG will provide in-kind assistance with design criteria and fish screen guidance. CH2M HILL will prepare engineering plans and specifications in coordination with CDFG and NMFS, prepare the environmental document, and assist in permit acquisition. ACID and CH2M HILL will coordinate with each of agencies listed on Figure 3 to obtain guidance through the permit approval and acquisition process. ACID was formed in July 1914 under Division 11 of the State Water Code and is the oldest such District in the Sacramento Valley.

ACID selected CH2M HILL sole-source to provide consulting services because of the firm's 51 years of experience in water resources engineering, biological sciences, and environmental planning. Recent projects are fish screen designs for Glenn-Colusa Irrigation District and Reclamation District 108 Sacramento River diversions, Butte Creek Siphon Project design, and environmental documentation and permitting for the siphon, all undertaken in cooperation with the USFWS, Reclamation, U.S. Army Corps of Engineers, CDFG, DWR, State Reclamation Board, Regional Water Quality Control Board, and NMFS. Figure 4 above summarizes applicable projects successfully completed by the project team.

Dee Swearingen, Project Manager

ACID General Manager

Dee Swearingen has managed ACID since 1995 and has more than 28 years of experience in water resources management, water agency administration, and water resources consulting. He has been general manager, secretary, and treasurer for water districts and negotiated water contracts with the DWR and Reclamation. His expertise encompasses district management, budget development, cost analysis, investments, structural design and implementation, water distribution system operation, dam operation and maintenance, liaison, personnel supervision, and public relations. He has been an Association of California Water Agencies board member, Executive Committee member, Vision 2000 Committee member, and California Water Districts Section Vice Chairman and chaired the Northern California Water Association Managers' Committee. Mr. Swearingen has administered and implemented numerous engineering projects for district facilities, including fish screening and passage structures.

Ronald Fehringer, P.E., Project Manager

M.S., B.S., Agricultural Engineering; Registered Professional Engineer: California

Ron Fehringer has managed a variety of conveyance system design projects. For the Butte Creek Water Supply and Fish Passage Plan, he characterized water rights associated with Butte Creek and met with water users to assess their existing diversions and future water needs. He developed a conceptual design for alternate water delivery means as part of a comparison of water supply and fish passage alternatives for Reclamation. Mr. Fehringer managed preliminary design, final design, and construction management inspection for the WCWD's Butte Creek Siphon and Dam Removal project to simultaneously improve fish passage in Butte Creek and the reliability of water deliveries to District customers.

Howard Wilson, P.E., CH2M HILL Senior Reviewer

B.S., Civil Engineering; Registered Professional Engineer: California, Nevada, and Washington

Howard Wilson has more than 30 years of experience, including managing large, riparian water diversion and associated fish screen projects. He managed the alternatives evaluation for improving the existing GCID rotary drum fish screen and design of the successful GCID interim screen. He is now managing the

Agreement No. _____

Exhibit _____

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY
 BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

STATE OF CALIFORNIA)

COUNTY OF SHASTA)

DEE E. SWEARINGEN
 (name)

being first duly sworn, deposes and

says that he or she is

GENERAL MANAGER
 (position title)

of

ANDERSON-COTTONWOOD IRRIGATION DISTRICT
 (the bidder)

the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: JUNE 30, 1998

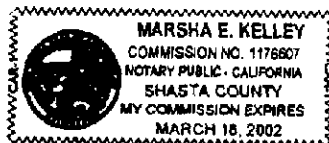
By

Dee E. Swearingen
 (person signing for bidder)

Subscribed and sworn to before me on

JUNE 30, 1998

Marsha E. Kelley
 (Notary Public)



(Notarial Seal)